

WHAT IS CLAIMED IS:

1. A temperature controller used in an optical-communication device for conforming a current temperature, comprising:

5 a temperature sensor for detecting the current temperature; and,

a temperature-comparison section for comparing the current temperature detected by the temperature sensor with a predetermined temperature indicative of a proper operating temperature for the device, the temperature-comparison section comprising,

10 a differential amplifier for outputting a difference between signals which are inputted respectively into anode and cathode terminals thereof;

a first resistance pad connected to the temperature sensor;

a second resistance pad connected to the anode terminal of the differential amplifier and spaced from the first resistance pad;

15 a third resistance pad connected to the cathode terminal of the differential amplifier and spaced from the first and second resistance pads; and,

a fourth resistance pad for receiving a signal corresponding to the predetermined temperature and spaced from the first, second, and third resistance pads, wherein the first to fourth resistance pads are short-circuited with one another selectively according to a type of the temperature sensor so as to vary the polarity of the signals
20 inputted into the differential amplifier.

2. The temperature controller according to claim 1, wherein the temperature sensor comprises a PTC sensor, the first and second resistance pads being short-circuited with each other, and the third and fourth resistance pads being short-circuited with each other.

5 3. The temperature controller according to claim 1, wherein the temperature sensor comprises an NTC sensor, the first and third resistance pads being short-circuited with each other, and the second and fourth resistance pads being short-circuited with each other.

 4. The temperature controller according to claim 1, further comprising at least one
10 resistor having a resistance of 0Ω which short-circuits the resistance pads with one another.

5. A method of maintaining the temperature of an optical-communication device, comprising:

detecting a current temperature of the device;

15 comparing the current temperature to a predetermined temperature;

generating a signal which represents a difference between the current temperature and the predetermined temperature; and,

providing a plurality of resistance pads that are selectively short-circuited with one another according to a type of the temperature sensor so as to vary the polarity of the
20 signals inputted into the differential amplifier.